Stem Cell Agency Board Approves New Clinical Trial for Type 1 Diabetes

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Oakland, CA - Today the governing Board of the California Institute for Regenerative Medicine (CIRM) awarded $11.08 Million to Dr. Peter Stock at the University of California San Francisco (UCSF) to conduct a clinical trial for treatment of Type 1 Diabetes (T1D).

The award brings the total number of CIRM funded clinical trials to 54.

T1D is a chronic autoimmune disease that affects approximately 1.25 million Americans, with 40,000 new diagnoses each year. T1D occurs as a result of the body's immune system destroying its own pancreatic beta cells. These cells are necessary to produce the vital hormone insulin, which regulates blood sugar levels in the body. As a result of a lack of insulin, there is no blood sugar control in T1D patients, gradually causing disabling and life-threatening complications such as heart disease, nerve damage, and vision problems.

There is no cure for T1D. Current treatments consist of blood sugar monitoring and multiple daily injections of insulin. Transplantation of beta cells, contained in donor pancreatic islets, can reverse the symptoms of diabetes. However, due to a poor islet survival rate, transplants require islets from multiple donors. Furthermore, since islet cells are transplanted directly into the vessels that enter the liver, it is extremely difficult to monitor and retrieve these cells should the need arise.

Dr. Stock's clinical trial at UCSF aims to address these limitations. The trial will be using parathyroid glands to aid in the success and viability of the transplant procedure. Co-transplantation of islets and parathyroid glands, from the same donor, substantially increases beta cell survival, potentially enabling adequate long-term insulin production and removing the need for multiple donors. Additionally, the co-transplantation will occur in the patient's forearm, which allows for easier monitoring and improves the effectiveness and accessibility of islet transplants for patients.

"This team's innovative approach to develop a definitive cell-based treatment for Type 1 Diabetes has the potential to address an unmet medical need that exists despite advancements in diabetes therapy." says Maria T. Millan, M.D., the President and CEO of CIRM. "The success of this clinical trial could enable the successful application of islet cell transplants but also of future stem-cell based approaches for diabetes."

CIRM has funded three other clinical trials for T1D. One of these was conducted by *Caladrius Biosciences* and two by *ViaCyte, Inc.*

About CIRM

At CIRM, we never forget that we were created by the people of California to accelerate stem cell treatments to patients with unmet medical needs, and act with a sense of urgency to succeed in that mission.

To meet this challenge, our team of highly trained and experienced professionals actively partners with both academia and industry in a hands-on, entrepreneurial environment to fast track the development of today's most promising stem cell technologies.

With $3 billion in funding and approximately 300 active stem cell programs in our portfolio, CIRM is the world's largest institution dedicated to helping people by bringing the future of cellular medicine closer to reality.

For more information go to www.cirm.ca.gov